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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,022

10/07/2005

Tao Yang

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EXAMINER

GUZMAN, APRIL S

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

10/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,022

Applicant(s)

YANG ET AL.

Examiner

April S. Guzman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/16/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The Examiner acknowledges the receipt of the Applicant's amendments filed 08/07/2007. Claims 1, 5, and 7 have been amended. Claims 9-10 have been added. Claims 1-10 are therefore currently pending in the present application.

Response to Arguments

The Examiner acknowledges the amendments made to claim 1 to remove the informalities and therefore the Examiner withdraws the 35 U.S.C. 112 rejection made on claim 1.

Applicant's arguments filed 08/07/2007 have been fully considered but they are not persuasive.

The Applicant essentially argues that the cited portions of Leapman et al. do not teach an LCD control board, or a supply adapter for supplying power to the LCD control board, located in the base, as recited in independent claim 1. The Applicant also argues that there is no teaching in the cited portions of Leapman et al. of "a main board containing a supply circuit for providing a voltage conversion for the main board and charging a secondary battery," as is recited in independent claim 1.

The Examiner respectfully disagrees because Leapman et al. teach power for the components is provided by battery 165 in base 120 and battery 167 in tablet PC 130. Power connections are provided through the hinges in a known manner to provide operating and recharging power through an AC connection. Both components have connectors for receiving power. The AC power is transformed to a DC power of suitable level prior to provision to the

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components ([0020]). A motherboard is holding many of the other component in Figure 3 (Figure 3, and [0026]). I/O bridge 322 and graphics controller 327 are each integrated on the motherboard along with the system controller 312 ([0027]). Figure 3 is a block diagram of a computer system 300 that shows components found in combination of the base and the tablet PC. Many of the ports, devices and other components shown in Figure 3 can be distributed between, or duplicated in, the tablet PC and base ([0025]).

Consequently, in view of the above teachings of Leapman et al. and having addressed Applicant's arguments, the previous rejection made on independent claim 1 is maintained and made Final by the Examiner.

As claims 2-6, and 9-10 depend on and include the limitations of claim 1, the Applicant's arguments are not persuasive in view of the sustained rejection of claim 1 explained above.

Applicant also argues that independent claim 7 similarly recites "an LCD control board and power supply board are mounted in the base."

Consequently, in view of the sustained rejection of claim 1 and the above teachings of Leapman et al. and having addressed Applicant's arguments, the previous rejection made on independent claim 7 is maintained and made Final by the Examiner.

As claim 8 depends on and include all the limitations of claim 7, the Applicant's arguments are not persuasive in view of the sustained rejection of claim 7 explained above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Leapman et al. (U.S. Patent Application Publication # 2003/0198008)** in view of **Lee et al. (U.S. Patent # 5,355,279)**.

Consider **claim 1**, Leapman et al. a wireless human-machine interactive device of personal computer comprising, a display and a base, in which the display can be independently used separately from the base (Abstract, Figure 1, [0005], and [0014]-[0015]), wherein:

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a display output module comprising at least a central processing unit (CPU) and a liquid crystal display (LCD), a main board containing a supply circuit for providing a voltage conversion for the main board and charging a secondary battery, a backlight board, a touch screen control board, a peripheral interface board comprising all Input/Output (I/O) device interfaces and a secondary battery are mounted on a rear part of the display (Figure 1, Figure 2, Figure3, [0014]-[0015], [0019]-[0020], [0023]-[0024], and [0026]-[0028]);

an LCD control board and a supply adapter for converting a commercial supply into a direct current (DC) supply and supplying power to the LCD control board are mounted in the base ([0014]-[0016], [0020]-[0021], and [0026]-[0027]).

However, Leapman et al. fail to teach the base and the display are electrically connected by gilded pins (golden finger) or a multi-pin/multi-jack connector.

In the related art, Lee et al. teach the electrical connections between the base and the display are achieved by gilded pins (golden finger) or a multi-pin/multi-jack connector (Abstract, Figure 1, Figure 2A, Figure 2B, column 3 lines 18-29, column 4 lines 19-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Lee et al. into the teachings of Leapman et al. for the purpose of detachably connecting the display and the base to allow the device to be adapted to function in multiple modes of operation.

Consider **claim 2, as applied to claim 1 above**, Leapman et al. as modified by Lee et al. further teach wherein a memory, a full-duplex wireless communication module, a data receiver and decompressor module, a audio output module, a bus extension port and a peripheral interface

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circuit module are further mounted on the main board in said display (Leapman et al. – Figure 1, Figure 2, Figure 3, [0015], [0017], [0019], and [0026]-[0029]).

Consider **claim 3, as applied to claim 1 above**, Leapman et al. as modified by Lee et al. further teach wherein control keys for a display screen and an indicative light circuit board are further mounted on said peripheral interface board (Leapman et al. – Figure 1, [0015], [0019], [0023]-[0024], and [0026]).

Consider **claim 4, as applied to claim 1 above**, Leapman et al. as modified by Lee et al. further teach a display except wherein a thickness of said display is no more than 25 millimeters.

Nonetheless, to the extent that Leapman et al. as modified by Lee et al. does not specify exact measures of the thickness of the display, this figure would have been a matter of routine experimentation to one of ordinary skill in the art at the time the invention was made, in order to provide a thin, light weight and portable display that is separable from the base that takes less space on a users' desktop. See *In re Aller*, 105 USPQ 233 (CCPA 1955) (Where general conditions of the claim are disclosed in the prior art, it is not inventive to discover optimal or workable ranges by routine experimentation).

Consider **claim 5, as applied to claim 1 above**, Leapman et al. as modified by Lee et al. further teach wherein the main board of said display forms a wireless data communication connection link directly with a main body of the personal computer, and forms information exchange links with circuits on the LCD control board within the base through the gilded pins (golden finger) or the multi-pin/multi-jack connector between the display and the base (Leapman et al. – Figure 1, and [0016]-[0017]).

Consider **claim 6**, as applied to **claim 1** above, Leapman et al. as modified by Lee et al. further teach the secondary battery mounted on the rear part of said display (Leapman et al. – Figure 1, and [0020]).

Nonetheless, the Examiner takes Official Notice of the fact that a battery can be a three-series one-parallel one.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a three-series one-parallel one for the battery taught by Leapman et al. as modified by Lee et al. for the purpose of reducing the weight of the display.

Consider **claim 7**, Leapman et al. teach a liquid crystal display of personal computer comprising, a display main body and a base, wherein a backlight board, control keys for a display screen and a indicative light circuit board are mounted on a rear part of said display main body; an LCD control board and a power supply board are mounted in the base (Figure 1, Figure 2, Figure3, [0014]-[0016], [0019]-[0021], [0023]-[0024], and [0026]-[0029]).

However, Leapman et al. fail to teach the base and the display are achieved by gilded pins (golden finger) or a multi-pin/multijack connector.

In the related art, Lee et al. teach electrical connections between the base and the display are achieved by gilded pins (golden finger) or a multi-pin/multijack connector (Abstract, Figure 1, Figure 2A, Figure 2B, column 3 lines 18-29, column 4 lines 19-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Lee et al. into the teachings of Leapman et al. for the purpose of detachably connecting the display and the base to allow the device to be adapted to function in multiple modes of operation.

Consider **claim 8, as applied to claim 7 above**, Leapman et al. as modified by Lee et al. further teach a display except wherein a thickness of said display main body is no more than 25 millimeters.

Nonetheless, to the extent that Leapman et al. as modified by Lee et al. does not specify exact measures of the thickness of the display, this figure would have been a matter of routine experimentation to one of ordinary skill in the art at the time the invention was made, in order to provide a thin, light weight and portable display that is separable from the base that takes less space on a users desktop. See *In re Aller*, 105 USPQ 233 (CCPA 1955) (Where general conditions of the claim are disclosed in the prior art, it is not inventive to discover optimal or workable ranges by routine experimentation).

Consider **claim 9, as applied to claim 1 above**, Leapman et al. as modified by Lee et al. further teach wherein at least one of the central processing unit (CPU), the main board, the backlight board, the touch screen control board, the peripheral interface board, and the secondary battery is mounted on a rear part of the display (Leapman et al. – Figure 1, Figure 3, and [0025]-[0029]).

Consider **claim 10, as applied to claim 1 above**, Leapman et al. as modified by Lee et al. further teach wherein the central processing unit (CPU), the main board, the backlight board, the touch screen control board, the peripheral interface board, and the secondary battery are mounted on a rear part of the display (Leapman et al. – Figure 1, Figure 3, and [0025]-[0029]).

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: see PTO-892 Notice of Reference Cited.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

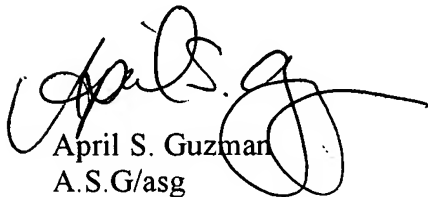
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to April S. Guzman whose telephone number is 571-270-1101. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana Le can be reached on 571-272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



April S. Guzman
A.S.G/asg

10/01/07



10-12-07
LANA LE
PRIMARY EXAMINER